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PATENT APPLICATION

ATTORNEY DOCKET NO. 10011530 -1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Kurt E. Spears et al

Confirmation No.: 9408

Application No.: 09/824323

Examiner: Safaipour, H

Filing Date: Apr 02, 2001

Group Art Unit: 2622

Title: Optical Image Scanner Using Pre-Scan And Post-Scan Compensation For Illumination Nonuniformity

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 09/02/2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) $500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

( )	one month	$120.00
( )	two months	$450.00
( )	three months	$1020.00
( )	four months	$1590.00

( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of $500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Number of pages: 12

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Respectfully submitted,

Kurt E. Spears et al

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IN THE
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Inventor(s): Kurt E. Spears *et. al.*

Serial No.: 09/824,323 Examiner: Safaipour, Houshang

Filing Date: 04/02/2001 Group Art Unit: 2622

Title: OPTICAL IMAGE SCANNER USING PRE-SCAN AND POST-SCAN COMPENSATION FOR ILLUMINATION NONUNIFORMITY

COMMISSIONER FOR PATENTS
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PATENT APPLICATION

BRIEF ON APPEAL

INTRODUCTION

Pursuant to the provisions of 37 CFR Part 41, Subpart B, applicants hereby appeal to the Board of Patent Appeals and Interferences (the "Board") from the examiner's final rejection dated 11/10/2004. A notice of appeal was timely filed on 09/02/2005, in accordance with 37 CFR § 41.31(a)(1).

REAL PARTY IN INTEREST

The entire interest in the present application has been assigned to Hewlett-Packard Development Company, L.P. as recorded at reel 014061, frame 0492.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Claims 1-10 are pending in the application.

Claims 1-10 are finally rejected.

Claims 1-6 are on appeal.

STATUS OF AMENDMENTS

There are no after-final amendments.

SUMMARY OF CLAIMED SUBJECT MATTER

The invention relates generally to image scanners and more specifically to compensation for changes in intensity and color during warm up of a lamp used for image scanning. A scanner performs an initial calibration for lamp intensity before scanning (figure 2, calibration strip 204; page 8, lines 17-20), and a final calibration for lamp intensity after scanning (figure 2, calibration strip 206; page 8, lines 21-26). At least some compensation is performed after scanning is completed (page 8, line 26 through page 9, line 3).

Claim 1 specifies a method of scanning, comprising: calibrating an initial gain for data from a photosensor, before scanning (figure 2, calibration strip 204; page 8, lines 17-20); obtaining image data from the photosensor; calibrating a final gain for the photosensor, after obtaining the image data (figure 2, calibration strip 206; page 8, lines 21-26); and using the initial gain and the final gain to modify the image data from the photosensor (for example, page 10, lines 6-12).

Claim 2, dependent on claim 1, further specifies that the step of calibrating an initial gain further comprises scanning a first calibration strip (figure 2, calibration strip 204; page 8, lines 17-20).

Claim 3, dependent on claim 2, further specifies that the step of calibrating a final gain further comprises scanning a second calibration strip (figure 2, calibration strip 206; page 8, lines 21-26).

Claim 4, dependent on claim 3, further specifies that the photosensor being a first photosensor, the method further comprises: scanning a third calibration strip, with a second photosensor. during the step of obtaining image data; calibrating a gain for the second photosensor; and using the gain for the second photosensor, and the initial gain, and the final gain, to modify the image data from the first photosensor (figure 3, 302; page 10, line 25, to page 11, line 14).

Claim 5, dependent on claim 3, further specifies the photosensor being a first photosensor, the method further comprising: scanning a portion of a moving carriage, with a second photosensor, during the step of obtaining image data; calibrating a gain for the second photosensor; and using the gain for the second photosensor, and the initial gain, and the final gain, to modify the image data from the first photosensor (page 9, lines 17-20).

Claim 6, dependent on claim 2, further specifies that the step of calibrating a final gain further comprises scanning the first calibration strip a second time (page 8, lines 24-26).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 1-5 are unpatentable under 35 U.S.C. § 102(e) as anticipated by U.S. Patent Number 5,907,742 (Johnson *et al.*).

2. Whether claim 6 is unpatentable under 35 U.S.C. § 103(a) as obvious in light of Johnson *et al.*

ARGUMENT

CLAIMS 1-3

Claim 1 specifies calibrating a final gain for the photosensor, after obtaining the image data; and using the initial gain and the final gain to modify the image data from the photosensor. Johnson *et al.* do not teach or suggest calibrating a final gain for the

photosensor, after obtaining the image data; and using the initial gain and the final gain to modify the image data from the photosensor.

In the office action mailed 06/03/2005, at page 2, the examiner cites Johnson *et al.*, column 7, line 40, through column 8, line 6, and column 8, lines 40-64, for calibrating a final gain for the photosensor, after obtaining the image data; and using the initial gain and the final gain to modify the image data from the photosensor. The cited text does not support the examiner's characterization. Johnson *et al.*, column 7, line 40, through column 8, line 6, states that the scanner performs an initial gain calibration before scanning, and uses that calibration to compensate gain during scanning. Johnson *et al.*, column 8, lines 40-64 discuss compensation during scanning. The gain adjustment in Johnson *et al.* occurs before analog-to-digital conversion (see figure 1, where gain is adjusted for amplifiers 62 before A/D 64). There is no teaching or suggestion in the cited text that a final calibration is made after obtaining the image data. There is no teaching or suggestion in the cited text that there is any data being modified. In particular, there is no teaching or suggestion of using the initial gain and the final gain to modify the image data from the photosensor.

In the office action mailed 06/03/2005, at page 3, the examiner cites Johnson *et al.*, column 3, line 62, through column 4, line 39, for calibrating a final gain for the photosensor, after obtaining the image data; and using the initial gain and the final gain to modify the image data from the photosensor. The cited text does not support the examiner's characterization. Johnson *et al.*, column 3, line 62, through column 4, line 39, states that the scanner performs an initial gain calibration before scanning, and uses that calibration to compensate gain during scanning, and adjusts gain during scanning to compensate for changes in light intensity. There is no teaching or suggestion that a final calibration is made after obtaining the image data. There is no data being modified in the cited text. In particular, there is no teaching or suggestion of using the initial gain and the final gain to modify the image data from the photosensor.

CLAIM 4

Claim 4, dependent on claim 3, further specifies scanning a third calibration strip. Johnson *et al.* do not teach or suggest scanning a third calibration strip.

In the office action mailed 06/03/2005, at page 3, the examiner cites Johnson *et al.*, column 8, line 65, through column 9, line 38 for scanning a third calibration strip. The cited text does not support the examiner's characterization. There is no teaching or suggestion in the cited text for three calibration strips.

CLAIM 5

Claim 5, dependent on claim 3, further specifies scanning a portion of a moving carriage. Johnson *et al.* do not teach or suggest scanning a portion of a moving carriage.

In the office action mailed 06/03/2005, at page 3, the examiner cites Johnson *et al.*, column 8, line 65, through column 9, line 38, for scanning a portion of a moving carriage. The cited text does not support the examiner's characterization. There is no teaching or suggestion in the cited text for scanning a portion of a moving carriage.

CLAIM 6

Claim 6, dependent on claim 2, further specifies scanning the first calibration strip a second time. Johnson *et al.* do not teach or suggest scanning the first calibration strip a second time. Claim 6 in conjunction with independent claim 1 specifies that the first calibration strip is scanned a second time after obtaining the image data.

In the office action mailed 06/03/2005, at page 5, the examiner makes an unsupported statement that it is well known in the art to scan a white strip a second time for calibration purposes. Assuming for the sake of argument that the examiner is correct, that does not state all the limitations of claim 6. There is no teaching or suggestion in the prior art for scanning a white strip a second time after obtaining the image data. The examiner then makes a completely unsupported conclusion that it would be obvious to include such a process in Johnson *et al.* No *prima facie* case for obviousness has been established. From MPEP 2142, to establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. The

examiner has provided no suggestion or motivation to modify Johnson *et al.* to scan a white strip a second time after obtaining the image data.

CONCLUSION

In view of the above, applicant respectfully requests that the examiner's rejection of claims 1-6 be reversed.

Respectfully submitted,

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CLAIMS APPENDIX

1. A method of scanning, comprising:

calibrating an initial gain for data from a photosensor, before scanning;

obtaining image data from the photosensor;

calibrating a final gain for the photosensor, after obtaining the image data; and

using the initial gain and the final gain to modify the image data from the photosensor.

2. The method of scanning as in claim 1, the step of calibrating an initial gain further comprising:

scanning a first calibration strip.

3. The method of scanning as in claim 2, the step of calibrating a final gain further comprising:

scanning a second calibration strip.

4. The method of scanning as in claim 3, the photosensor being a first photosensor, the method further comprising:

scanning a third calibration strip, with a second photosensor, during the step of obtaining image data;

calibrating a gain for the second photosensor; and

using the gain for the second photosensor, and the initial gain, and the final gain, to modify the image data from the first photosensor.

5. The method of scanning as in claim 3, the photosensor being a first photosensor, the method further comprising:

scanning a portion of a moving carriage, with a second photosensor, during the step of obtaining image data;

calibrating a gain for the second photosensor; and

using the gain for the second photosensor, and the initial gain, and the final gain, to modify the image data from the first photosensor.

6. The method of scanning as in claim 2, the step of calibrating a final gain further comprising:

scanning the first calibration strip a second time.

7. An apparatus for image scanning, comprising:

a platen for receiving an image to be scanned, the platen having a first end, and a second end opposite the first end, wherein a direction of scanning is from the first end to the second end;

a first calibration strip, near the first end; and

a second calibration strip, near the second end, and substantially parallel to the second end.

8. The apparatus of claim 7, further comprising:

a third calibration strip, along a side connecting the first end to the second end.

9. The apparatus of claim 7, further comprising:

a calibration tab on a carriage.

10. The apparatus of claim 7, further comprising:

a lamp for illuminating the image to be scanned, the lamp having an external heating system that keeps the lamp warm when the lamp is not illuminated.

EVIDENCE APPENDIX

Does not apply

RELATED PROCEEDINGS APPENDIX

None